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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0547; Project Identifier MCAI-2021-00574-T; Amendment 39-21762; AD 2021-21-02]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Airbus SAS Model A318, A319, A320, A321, A330-200, A330-200 Freighter, A330-300, A330-800, A330-900, A340-200, A340-300, A340-500, A340-600, and A380-800 series airplanes. This AD was prompted by a determination that repetitive disconnection and reconnection of certain parts manufacturer approval (PMA) nickel-cadmium (Ni-Cd) batteries during airplane parking or storage could lead to a reduction in capacity of those batteries. This AD requires replacing certain PMA Ni-Cd batteries with serviceable Ni-Cd batteries, or maintaining the electrical storage capacity of those PMA Ni-Cd batteries during airplane storage or parking. This AD corresponds to a previously proposed AD on type design Ni-Cd batteries with the same unsafe condition on the same model airplanes. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective December 20, 2021.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 20, 2021.

ADDRESSES: For service information identified in this final rule, contact Airbus SAS, Airworthiness Office–EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; internet https://www.airbus.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0547.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0547; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3225; email dan.rodina@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus SAS Model A318, A319, A320, A321, A330-200, A330-200 Freighter, A330-300, A330-800, A330-900, A340-200, A340-300, A340-500, A340-600, and A380-800 series airplanes. The NPRM published in the Federal Register on July 19, 2021 (86 FR 37936). The NPRM was prompted by a determination that repetitive disconnection and reconnection of certain PMA Ni-Cd batteries during airplane parking or storage could lead to a reduction in capacity of those batteries. In the NPRM, the FAA proposed to require replacing certain PMA Ni-Cd batteries with serviceable Ni-Cd batteries, or maintaining the electrical storage capacity of those PMA Ni-Cd batteries during airplane storage or parking. The NPRM corresponds to a previously proposed AD on type design Ni-Cd batteries with the same unsafe condition on the same model airplanes. The FAA is issuing this AD to address reduced capacity of certain PMA Ni-Cd batteries, which could lead to reduced battery endurance performance and possibly result in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International, which supported the NPRM without change.

The FAA received additional comments from two commenters, including American Airlines and United Airlines. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Combine Rulemaking

American Airlines and United Airlines stated there is an NPRM, Docket No. FAA-2021-0350 (86 FR 25810, May 11, 2021), for a different AD that addresses an unsafe condition for certain type design Ni-Cd batteries (original equipment manufacturer (OEM) parts) on Airbus airplanes, which corresponds to European Union Aviation Safety Agency (EASA) AD 2020-0274, dated December 10, 2020 (EASA AD 2020-0274). American Airlines and United Airlines noted that this NPRM, Docket No. FAA-2021-0547, addresses that same unsafe condition for PMA Ni-Cd batteries (PMA parts) and has the same required actions. American Airlines requested that the intent of both NPRMs be combined into a single AD to simplify tracking and actions associated with the aforementioned NPRMs. United Airlines questioned why the FAA is planning on issuing two separate ADs.

The FAA does not agree to combine both NPRMs into a single AD. At the time the NPRMs were developed, the FAA separated the rulemaking for OEM parts from the PMA parts since the FAA was informed of implementation issues with the adoption of combined rulemaking (OEM parts and PMA parts) by the foreign civil aviation authorities. Therefore, as an interim action, the FAA has decided to issue separate ADs for the OEM parts and the PMA parts. The FAA is discussing how to address OEM and PMA parts in ADs for future rulemaking. However, in the interest of safety to address the unsafe condition on the PMA parts identified in this AD, the FAA has determined this AD cannot be delayed.

Request for Information on the Work Scope

United Airlines stated that the requirements in paragraphs (g), (h), and (i) of the proposed AD for the PMA parts have more detail than the requirements in NPRM, Docket No. FAA-2021-0350, for the OEM parts. United Airlines asked if there is contrasting work scopes between the OEM parts NPRM and the PMA parts NPRM.

The FAA notes that the work scope is the same in both NPRMs. The OEM parts NPRM (published as AD 2021-20-08, Amendment 39-21746 (86 FR 57025, October 14, 2021)), refers to EASA AD 2020-0274 as the appropriate source of service information. EASA AD 2020-0274 provides the details for the required actions. Paragraphs (g), (h), and (i) of this AD correspond to the Definitions and paragraphs (1) and (2) of EASA AD 2020-0274.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

Airbus has issued Alert Operators Transmission–AOT A24L007-20, Rev 00, dated September 23, 2020; Alert Operators Transmission–AOT A24N006-20, Rev 01, dated October 12, 2020; and Alert Operators Transmission–AOT A24R009-20, Rev 00, dated September 23, 2020. This service information describes procedures for maintaining the electrical storage capacity of Ni-Cd batteries during airplane storage or parking. These documents are distinct since they apply to different airplane models. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects up to 1,814 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs for Required Actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
5 work-hours × $85 per hour = $425	$8,000	$8,425	Up to $15,282,950

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-21-02 Airbus SAS: Amendment 39-21762; Docket No. FAA-2021-0547; Project Identifier MCAI-2021-00574-T.

(a) Effective Date

This airworthiness directive (AD) is effective December 20, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus SAS airplanes identified in paragraphs (c)(1) through (7) of this AD, certificated in any category, equipped with any parts manufacturer approval (PMA) part approved for the type design nickel cadmium (Ni-Cd) batteries identified in Figure 1 to paragraph (c) of this AD.

Figure 1 to paragraph (c) – *Ni-Cd battery*

Airplane Type	Part Number
A318, A319, A320 and A321	2758 or 416526
A330 and A340	4059, 405CH or 505CH
A380	505CH2

(1) Model A318-111, -112, -121, and -122 airplanes.
(2) Model A319-111, -112, -113, -114, -115, -131, -132, -133, -151N, -153N, and -171N airplanes.
(3) Model A320-211, -212, -214, -215, -216, -231, -232, -233, -251N, -252N, -253N, -271N, -272N, and -273N airplanes.
(4) Model A321-111, -112, -131, -211, -212, -213, -231, -232, -251N, -251NX, -252N, -252NX, -253N, -253NX, -271N, -271NX, -272N, and -272NX airplanes.
(5) Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, -743L, -841, and -941 airplanes.
(6) Model A340-211, -212, -213, -311, -312, -313, -541, -542, -642, and -643 airplanes.
(7) Model A380-841, -842, and -861 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical Power.

(e) Unsafe Condition

This AD was prompted by a determination that repetitive disconnection and reconnection of certain PMA Ni-Cd batteries during airplane parking or storage could lead to a reduction in capacity of those batteries. The FAA is issuing this AD to address reduced capacity of certain PMA Ni-Cd batteries, which could lead to reduced battery endurance performance and possibly result in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Definitions

(1) For the purposes of this AD, a serviceable PMA Ni-Cd battery is defined as a PMA battery approved for a Ni-Cd battery identified in Figure 1 to paragraph (c) of this AD, all serial numbers, which was, prior to installation, fully (re)charged in an approved battery shop at constant current and after (re)charging, was never installed and (re)connected to an airplane which was parked or stored for more than 2 days, except when the disconnection and subsequent connection of the battery has been accomplished using the preservation procedures as defined in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD. Where the applicable service information refers to Ni-Cd battery part numbers, use those procedures, as applicable, for the PMA batteries that are approved for that part number.

(i) For A318, A319, A320, and A321 airplanes: Airbus Alert Operators Transmission–AOT A24N006-20, Rev 01, dated October 12, 2020.

(ii) For A330 and A340 airplanes: Airbus Alert Operators Transmission–AOT A24L007-20, Rev 00, dated September 23, 2020.

(iii) For A380 airplanes: Airbus Alert Operators Transmission–
AOT A24R009-20, Rev 00, dated September 23, 2020.

(2) For the purposes of this AD, a serviceable non-PMA Ni-Cd battery is defined as a type design Ni-Cd battery having a part number identified in Figure 1 to paragraph (c) of this AD, all serial numbers, which was, prior to installation, fully (re)charged in an approved battery shop at constant current and after (re)charging, was never installed and (re)connected to an airplane which was parked or stored for more than 2 days, except when the disconnection and subsequent connection of the battery has been accomplished using the preservation procedures as defined in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD.

(3) For the purposes of this AD, a reconnection cycle is defined as one instance of disconnection and connection of a battery, installed on an airplane, to the airplane electrical system during parking or storage periods (for A330 and A340 airplanes) or parking periods (for A318, A319, A320, A321 and A380 airplanes) since the last battery charge at constant current in an approved battery shop, as defined in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD, except when the conditions specified in paragraph (g)(3)(i) or (ii) have been met. Where the applicable service information refers to Ni-Cd battery part numbers, use those procedures, as applicable, for the PMA batteries that are approved for that part number.

(i) The on-wing battery preservation procedures as defined in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD have been applied.

(ii) The battery has been disconnected, physically removed from the airplane and then subsequently installed and connected following a shop visit as defined in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD.

(4) For the purposes of this AD: Group 1 airplanes are those which have a PMA part approved for Ni-Cd batteries identified in Figure 1 to paragraph (c) of this AD installed, which has more than 4 reconnection cycles. Group 2 airplanes are those which have a PMA part approved for Ni-Cd

batteries identified in Figure 1 to paragraph (c) of this AD installed, which has 4 or less reconnection cycles, or have a serviceable PMA Ni-Cd battery.

(h) Replacement

(1) For Group 1 airplanes: Within the applicable compliance time specified in paragraphs (h)(1)(i) and (ii) of this AD and thereafter before each release to service of an airplane after parking or storage, as applicable, replace each PMA part approved for a Ni-Cd battery identified in Figure 1 to paragraph (c) of this AD with a serviceable PMA Ni-Cd battery or serviceable non-PMA Ni-Cd battery, in accordance with the instructions of the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD. Where the applicable service information refers to Ni-Cd battery part numbers, use those procedures, as applicable, for the PMA batteries that are approved for that part number. After replacement of a battery with a serviceable PMA Ni-Cd battery, the airplane becomes a Group 2 airplane.

Note 1 to paragraph (h)(1): Airplanes on which a battery is replaced with a serviceable non-PMA Ni-Cd battery are no longer affected by this AD. AD 2021-20-08, Amendment 39-21746 (86 FR 57025, October 14, 2021), provides requirements for serviceable non-PMA Ni-Cd batteries.

Note 2 to paragraph (h)(1): For Group 1 and Group 2 airplanes, guidance on preventing further reduction of the capacity of Ni-Cd batteries can be found in the off-wing or on-wing battery preservation procedures (including battery shop visits, as applicable) detailed in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD.

(i) For A318, A319, A320 and A321 airplanes: Within 4 months after the effective date of this AD.

(ii) For A330, A340, and A380 airplanes: Within 6 months after the effective date of this AD.

(2) For Group 2 airplanes: A Group 2 airplane on which the preservation procedures, as detailed in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD, are not accomplished becomes a Group 1 airplane after application of more than 4 reconnection cycles and must comply with paragraph (h)(1) of this AD. A Group 2 airplane on which preservation procedures, as detailed in the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD, continue to be accomplished, remains a Group 2 airplane. Where the applicable service information refers to Ni-Cd battery part numbers, those procedures, as applicable, must be used for the PMA batteries that are approved for that part number.

(i) Preservation

For Group 2 airplanes: As of the effective date of this AD, provided that the preservation procedures (off-wing or on-wing, as applicable) are accomplished on an airplane in accordance with the instructions of the applicable service information specified in paragraphs (g)(1)(i) through (iii) of this AD, no replacements of affected parts in accordance with the requirements of paragraph (h)(1) of this AD are required (anymore) for that airplane. Where the applicable service information refers to Ni-Cd battery part numbers, those procedures, as applicable, must be used for the PMA batteries that are approved for that part number.

(j) No Reporting Requirement

Although the service information specified in paragraphs (g)(1)(i) through (iii) of this AD specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or the European Union Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): Except as required by paragraph (k)(2) of this AD, if any service information contains paragraphs that are labeled as RC, the instructions in RC paragraphs, including subparagraphs under an RC paragraph, must be done to comply with this AD; any paragraphs, including subparagraphs under those paragraphs, that are not identified as RC are recommended. The instructions in paragraphs, including subparagraphs under those paragraphs, not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the instructions identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to instructions identified as RC require approval of an AMOC.

(l) Related Information

For more information about this AD, contact Dan Rodina, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3225; email dan.rodina@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Airbus Alert Operators Transmission–AOT A24L007-20, Rev 00, dated September 23, 2020.

(ii) Airbus Alert Operators Transmission–AOT A24N006-20, Rev 01, dated October 12, 2020.

(iii) Airbus Alert Operators Transmission–AOT A24R009-20, Rev 00, dated September 23, 2020.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office–EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; internet https://www.airbus.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 29, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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